# KARNATAKA TEST HOUSE PVT. LTD.

MATERIAL TESTING LABORATORY

NABL Accredited Laboratory ISO/IEC 17025

NABL Accredited Lab Certificate No.T-0901


Report No. : KTH/ST/0166-0202/2017-2018 **Date: 02.05.2017**

## PHYSICAL TEST REPORT ON STEEL BARS

Name of the Customer : **The Executive Engineer,**
Project Division, RR Nagara Zone,
BBMP, Bangalore.

Name of the Project* : Construction of Building & Development of Govt. School & Improvements in school premises at Jalahalli Village in Ward No. 16, Bangalore.

Name of the Agency : M/s. K Damodar & Company, Malleshwaram, Bangalore.

Source of Sample : Supplied by Customer.

Nature of Sample* : Reinforcement steel – 8mm, 12mm, 16mm, 20mm & 25mm.

Customer Reference : Letter dtd. 15.04.2017

Sample Received on : 24.04.2017

Technical Reference : IS: 1786 – 2008 (RA-2013) & IS: 1608–1995 (RA–2000)
Bend & Re-bend IS: 1786 – 2008 (RA-2013) & IS: 1599 - 1985 (RA–2000)

Grade & Make of Steel : Fe-500 & Bhuwalka Premier TMT.

**TENSILE TEST :**

| **Dia (mm)** | **8** | **12** | **16** | **20** | **25** | **Limits as per IS : 1786-2008, Gr. Fe 500** |
|---|---|---|---|---|---|---|
| **Weight / unit length (kg/m)** | 0.391 | 0.891 | 1.582 | 2.415 | 3.945 | 8mm – 0.367 Min<br>12mm – 0.844 Min<br>16mm – 1.501 Min<br>20mm – 2.396 Min<br>25mm – 3.734 Min |
| **Yield Stress ($N/mm^2$)** | 597.13 | 610.40 | 542.40 | 554.14 | 544.20 | 500 Min |
| **Tensile Strength ($N/mm^2$)** | 716.56 | 690.02 | 691.68 | 646.50 | 672.61 | 8% More than actual 0.2% proof stress but not less than 545 $N/mm^2$ |
| **% Elongation (on 5.65 $\sqrt{A}$G.L)** | 25.0 | 23.3 | 26.2 | 24.0 | 22.40 | 12.0 Min. |




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2) The results listed refer only to the tested samples and applicable parameters.

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**BEND TEST:**

| *Sl. No.* | *Dia (mm)* | *Mandrel diameter* | *Observations* |
|---|---|---|---|
| 1. | 8 | 4 dia | No cracks observed. Passes the test. |
| 2. | 12 | 4 dia | No cracks observed. Passes the test. |
| 3. | 16 | 4 dia | No cracks observed. Passes the test. |
| 4. | 20 | 4 dia | No cracks observed. Passes the test. |
| 5. | 25 | 5 dia | No cracks observed. Passes the test. |

**REBEND TEST:**

| *Sl. No.* | *Dia (mm)* | *Mandrel diameter* | *Observations* |
|---|---|---|---|
| 1. | 8 | 5 dia | No cracks observed. Passes the test. |
| 2. | 12 | 7 dia | No cracks observed. Passes the test. |
| 3. | 16 | 7 dia | No cracks observed. Passes the test. |
| 4. | 20 | 7 dia | No cracks observed. Passes the test. |
| 5. | 25 | 7 dia | No cracks observed. Passes the test. |

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
**TECHNICAL MANAGER**



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## MATERIAL TESTING LABORATORY

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**Report No. : KTH/ST/0166-0202a/2017-2018** **Date: 05.05.2017**

## CHEMICAL TEST REPORT ON STEEL BARS

Name of the Customer : **The Executive Engineer,**
Project Division, RR Nagara Zone,
BBMP, Bangalore.

Name of the Project* : Construction of Building & Development of Govt. School & Improvements in school premises at Jalahalli Village in Ward No. 16, Bangalore.

Name of the Agency : M/s. K Damodar & Company, Malleshwaram, Bangalore.

Source of Sample : Supplied by Customer.

Nature of Sample* : Reinforcement steel – 8mm, 12mm, 16mm, 20mm & 25mm.

Customer Reference : Letter dtd. 15.04.2017

Sample Received on : 24.04.2017

Technical Reference : IS: 1786 – 2008 (RA-2013), IS: 1608- 2011.

Place of test : M/s. Mascot Laboratory Services, Bangalore (NABL Accredited)

Grade & Make of Steel : Fe-500 & Bhuwalka Premier TMT.

**CHEMICAL ANALYSIS :**

| *Sl. No.* | *Chemical Contents* | *8mm* | *12mm* | *16mm* | *20mm* | *25mm* | **Limits as per IS : 1786-2008, Gr. Fe 500** |
|---|---|---|---|---|---|---|---|
| 1. | Carbon (C)% | 0.180 | 0.207 | 0.256 | 0.181 | 0.237 | 0.300 Max |
| 2. | Sulphur (S) % | 0.037 | 0.037 | 0.039 | 0.026 | 0.052 | 0.055 Max |
| 3. | Phosphor (P) % | 0.049 | 0.055 | 0.053 | 0.037 | 0.052 | 0.055 Max |
| 4. | Sulphur & Phosphorus % | 0.086 | 0.092 | 0.092 | 0.063 | 0.104 | 0.105 Max |

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**(SREENIVASA.C.)**
**TECHNICAL MANAGER**


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